

REMARKS

Claims 1, 3, 4, 5, 7-14, 17, and 20 are now pending in this application. Claims 2, 6, 15-16, and 18-19 are cancelled herein. Claim 20 is new to this application. Claim 1 is the only pending independent claim.

Rejections Under 35 U.S.C. § 112

Claim 3 was rejected as indefinite. Claim 3 has been amended to clarify that the diffuser is a diffuser device configured to guide the cooling medium around the first part. Claim 20 states that the diffuser device is mounted on one end of the supply tube and the diffuser device surrounds the first part. Support for new claim 20 can be found at, for example, FIG. 2 (supply tube 6 and diffuser element 3) and paragraph [0036] of the publication of the pending application.

Rejections Under 35 U.S.C. § 102(e) and § 102(b)

Claims 1-8 and 12-14 stand rejected under 35 U.S.C. § 102(e) as anticipated by Zeisler et al. (U.S. Publication No. 2005/0201504). Claim 1 is rejected under 35 U.S.C. § 102(b) as anticipated by Ferrieri et al. (U.S. Patent No. 5,425,063).

Neither of the cited references teaches or suggests a removable insert as claimed herein. Moreover, neither of the cited references teaches or suggests a removable insert made of two different materials as claimed herein.

The term "insert," as used herein, refers to an assembly of at least two parts which can be easily placed (i.e., inserted) in or removed from the target body. This is made clear by FIG. 1 of the pending application (reproduced below) which shows insert 2 as being removable from and insertable into target body 1, where insert 2 includes two parts 8 and 9.

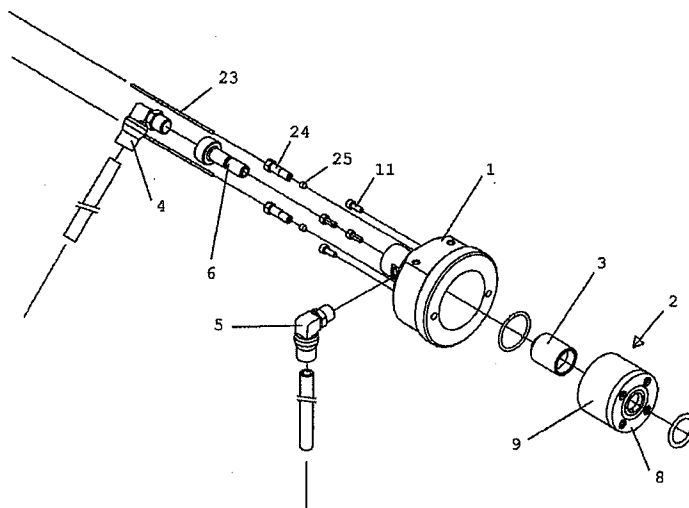


FIG. 1

The insert is the element which suffers the most from the irradiation. Accordingly, the insert has to be replaced more often than the other parts of the target body which can remain for a longer period of use. Advantageously, the insert as claimed herein can be easily inserted or removed from the target body.

Making the insert from at least two parts, with the at least two parts being made of different materials, allows each of the parts to be made of the material most appropriate for that part. For instance, the part which includes the cavity can be produced from niobium or tantalum, which are particularly suitable materials for irradiation purposes. As niobium and tantalum are known to be difficult to machine, it is not advantageous to make the entire insert from these materials. Providing a two part insert, however, addresses this problem because the other part or parts of the insert can then be produced from other materials, including materials which are easier to machine or more cost effective. In other words, using an insert of at least two parts allows one to use the materials most advantageous for the respective portions of the insert while still providing the parts in the form of a removable insert.

The Zeisler et al. Reference

Zeisler et al. does not describe the idea of having an insert made of two parts as claimed herein. As shown in FIG. 1 of Zeisler et al. (reproduced below), element 200 is separate from cooling jacket 210. FIG. 1 shows that cooling jacket 210 is attached via screws 280 and 290. Nowhere does Zeisler et al. teach or suggest that element 200 is insertable and/or removable with cooling jacket 210. The cooling jacket 210 and element 200 are never part of a single element which can be considered an insert as claimed herein. The cooling jacket 210 and element 200 are never assembled together through mechanical or chemical means such as bolts or welding. Accordingly, Zeisler et al. cannot anticipate the pending claims.

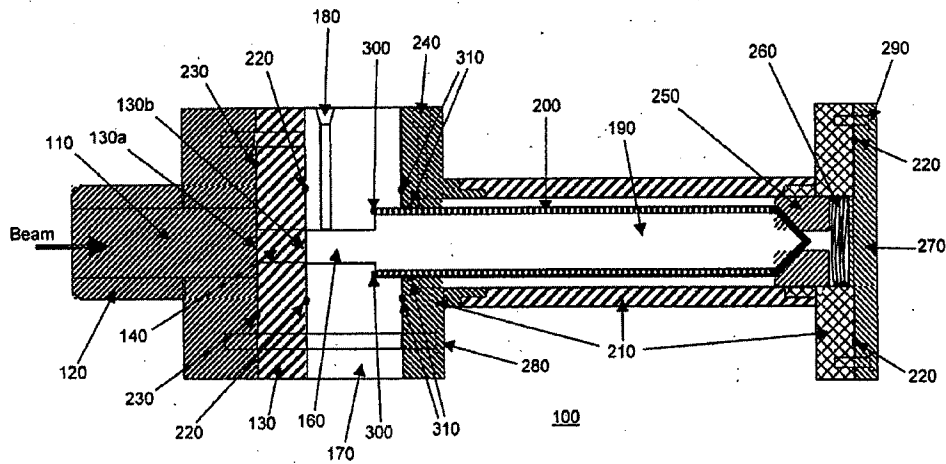


FIG. 1

The Ferrieri et al. Reference

The Ferrieri et al. reference also fails to suggest a two part insert as claimed herein. FIG. 1 of Ferrieri et al. (reproduced below) merely shows a water cooling block 204 which is attached to the back of target chamber 202. Ferrieri et al. does not teach or suggest that either or both of the target chamber 202 and water cooling block 204

are removable. The water cooling block 204 and target chamber 202 are never part of a single element which can be considered an insert as claimed herein. Accordingly, Ferrieri et al. also cannot anticipate the pending claims.

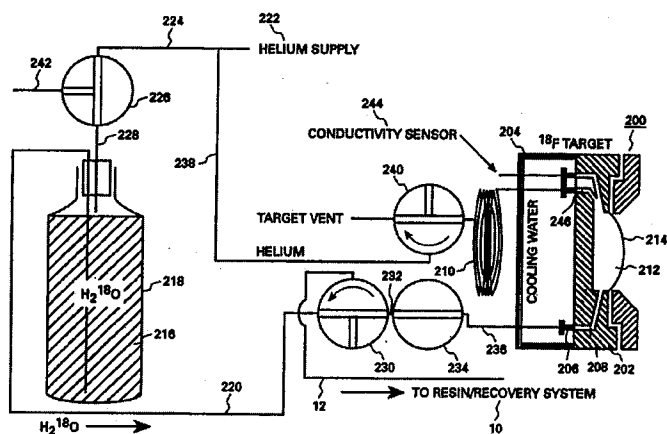


FIGURE 1

Rejections Under 35 U.S.C. § 103(a)

Claim 9 is rejected under 35 U.S.C. § 103(a) as obvious over Ferrieri and further in view of BE 1011263 A6 (hereinafter "the '263 reference"). Claims 9-11 are rejected as obvious over Zeisler et al. and further in view of the '263 reference. Claim 17 is rejected as obvious over Zeisler et al. and further in view of Wieland (U.S. Publication No. 2004/0000637).

As claims 9-11 and 17 ultimately depend from claim 1, claims 9-11 and 17 are believed to be patentable for at least the reasons described above in regard to claim 1. However, it is to be noted that the '263 reference and the Wieland et al. reference also fail to teach or suggest a removable insert having at least two parts.

Applicants enclose herewith an English translation of the '263 reference for the Examiner's consideration. This reference was previously cited in an Information Disclosure Statement dated May 14, 2007.

Application No. 10/597,974
AMENDMENT

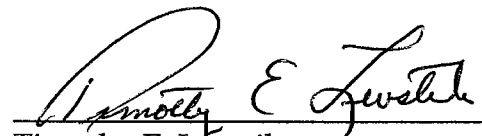
The Commissioner is hereby authorized to charge any additional fees which may be required with respect to this communication, or credit any overpayment, to Deposit Account No. 06-1135.

Respectfully submitted,

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